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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/643,394

08/18/2003

Yoshinori Tsubaki

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1933 7590 04/30/2007
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EXAMINER

SCHWARTZ, PAMELA R

ART UNIT

PAPER NUMBER

1774

MAIL DATE

DELIVERY MODE

04/30/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/643,394	Applicant(s) TSUBAKI ET AL.	
	Examiner Pamela R. Schwartz	Art Unit 1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/6/07.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-19 is/are pending in the application.
- 4a) Of the above claim(s) 7-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1 and 3-19 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to: See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 and 3-6 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims of copending Application Nos. 10/770,619, 10/833,842, 10/855,525, 10/886,433, 10/823,340, 10/868,481 and 10/935,049. Although the conflicting claims are not identical, they are not patentably distinct from each other because each of these copending applications recites in its claims an ink jet recording sheet having a layer comprising a hydrophilic binder and an inorganic pigment. The binder is recited as cross-linked with ionizing radiation. Relying on the specifications to flesh out the embodiments recited by the claims of the copending applications, the claims of the applications are directed to the same kinds of binders with the same or overlapping polymerization degree that have photosensitive groups capable of dimerization as set forth by applicants' claim 6. Determination of the ratio of components within conventional ranges would have been obvious to one of ordinary skill in the art. With respect to the inclusion of a multivalent

metal compound, inclusion of these materials is well known in the art for its mordanting properties.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

2. Claims 1 and 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda et al. (6,562,441) in view of Ohta et al. (5,989,771) for reasons of record and for reasons given below. The reference discloses a recording medium comprising a coating layer of a base material. The coating is a porous ink receiving layer formed from an aqueous composition comprising 100 parts by weight of a fine pigment of average diameter not larger than 1 micron and pore volume .4 to 2.5 ml/g and 1 to 100 parts by weight of a hydrophilic resin capable of forming a hydrogel by electron beam irradiation (see the abstract). The diameter of secondary particles is preferably 9 to 700 nm (col. 7, lines 1-8). The hydrophilic polymer may have side chains introduced by graft polymerization (col. 7, line 66 to col. 8, line 30). The polymerization degree is not disclosed but overlaps with the claimed range since the molecular weight of the resin is disclosed as in a range to 10,000 to 5,000,000 (col. 8, lines 37-52). Preferred amounts of the resin are as small as possible (col. 9, lines 22-42). The pore volume of the ink receiving layer is disclosed as ml/g (col. 9, lines 43-57). Based upon this disclosure, it would have been obvious to one of ordinary skill in the art to optimize pore volume to provide the desired amount of ink absorption capability in the layer. The reference discloses that inorganic salts may be included for their cationic characteristic (col. 10,

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lines 20-41). Such materials are also well known to those of ordinary skill in the art as multivalent metal compounds.

The primary reference does not disclose the particulars of the disclosed water soluble polymer derivatives having a side chain introduced by graft polymerization (col. 8, lines 18-20). Ohta et al. (5,989,771) teach water-soluble photosensitive resins that improve water resistance in ink jet recording layers without reduction in ink absorption (col. 2, lines 15-18). The resin may be a hydrophilic resin that incorporates photosensitive groups (col. 2, line 28 to col. 3, line 3, Example 2). It would have been obvious to one of ordinary skill in the art to use the water soluble resins modified with photosensitive groups taught by the secondary reference as the water soluble polymer derivative having a side chain introduced by graft polymerization of the primary reference in order to achieve the result of improved water resistance without loss of ink absorption.

3. Applicant's arguments with respect to claims 1 and 3-6 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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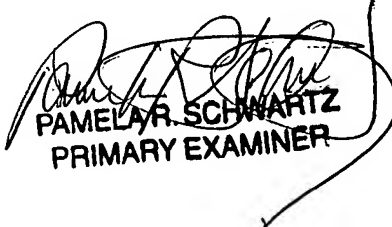
mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pamela Schwartz whose telephone number is (571) 272-1528.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PRSchwartz
April 25, 2007


PAMELA R. SCHWARTZ
PRIMARY EXAMINER